

## AMENDMENTS TO THE CLAIMS

This listing of claims replaces all prior versions and listings of claims in the application:

### Listing of Claims:

1. (Currently Amended) ~~An immunomodulator~~ A construct which comprises an antigen-presenting-cell (APC) targeting molecule coupled to an ~~immunomodulatory~~ antigen, wherein said APC targeting molecule ~~mimics the superantigen SMEZ-2 but does not include a fully functional T-cell receptor binding site~~ contains a mutant of superantigen SMEZ-2 having the amino acid sequence of SEQ ID NO:1, wherein the mutant has a mutation at one or more positions of 18, 42, 75, and 182 in SEQ ID NO:1 and wherein in use the construct can bind to Class II MHC molecules.

2. (Cancelled)

3. (Currently Presented) ~~An immunomodulator~~ The construct of claim 1, wherein the mutant of superantigen ~~which comprises SMEZ-2~~ has a mutation at position 18 in SEQ ID NO:1, or C at position 42 (D42C) in SEQ ID NO:1 ~~having one or more mutations at positions 18, 42, 75 and 182 of the amino acid sequence SEQ ID NO:1~~ coupled to an immunomodulatory antigen.

4. (Currently Amended) ~~An immunomodulator as claimed in claim 3~~ The construct of claim 3, wherein the mutant of superantigen SMEZ-2 has C at position 42 (D42C) in SEQ ID NO:1 ~~one or more mutations chosen from the group consisting of:~~

~~Y18A;~~

~~W75L;~~

~~K182Q; and~~

~~D42C.~~

5. (Withdrawn and Currently Amended) ~~An immunomodulator~~ The construct of claim 1, wherein the mutant of superantigen which comprises SMEZ-2 has A at position 18 (Y18A) in SEQ ID NO:1, C at position 42 (D42C) in SEQ ID NO:1, L at position 75 (W75L) in SEQ ID NO:1, and Q at position 182 (K182Q) in SEQ ID NO:1 having the mutations of Y18A, W75L, K182Q, and D42C, coupled to an immunomodulatory antigen.

6. (Withdrawn and Currently Amended) The construct of claim 1, wherein the mutant of superantigen ~~An immunomodulator which comprises SMEZ-2 has C at position 42 (D42C) in SEQ ID NO:1, L at position 75 (W75L) in SEQ ID NO:1, and Q at position 182 (K182Q) in SEQ ID NO:1 having the mutations of W75L, K182Q, and D42C, coupled to an immunomodulatory antigen.~~

7. (Currently Amended) ~~An immunomodulator~~ The construct of claim 1, wherein the APC targeting molecule is which comprises the defective TeR binding SMEZ-2 coupled to ovalbumin.

8. (Withdrawn and Currently Amended) ~~An immunomodulator~~ The construct of claim 1, wherein the APC targeting molecule is which comprises the defective TeR binding SMEZ-2 coupled to tetanus toxoid (TT) or a peptide thereof.

9. (Withdrawn and Currently Amended) ~~An immunomodulator~~ The construct of claim 1, wherein the APC targeting molecule is which comprises the defective TeR binding SMEZ-2 coupled to LCMV peptide.

10. (Currently amended) ~~An immunomodulator as claimed in~~ The construct of claim 1, wherein the coupling between the antigen-presenting-cell (APC) targeting molecule and the immunomodulatory antigen is reversible.

11. (Currently amended) ~~An immunomodulator as claimed in~~ The construct of claim 1, wherein the ~~immunomodulatory~~ antigen is a protein or a peptide.

12. (Currently amended) A pharmaceutical composition comprising ~~an immunomodulator according to~~ the construct of claim 1 and one or more pharmaceutically acceptable carriers, adjuvants, excipients and/or solvents.

13. (Currently amended) A vaccine comprising ~~an immunomodulator according to~~ the construct of claim 1.

14. (Withdrawn and Currently Amended) A method of therapeutic or prophylactic treatment of a disorder which requires the induction or stimulation of the immune system, comprising the administration to a subject requiring such treatment of ~~an immunomodulator or of a pharmaceutical composition according to~~ the construct of claim 1.

15. (Withdrawn) A method as claimed in claim 14 wherein the disorder is selected from the group consisting of bacterial, viral, fungal or parasitic infection, autoimmunity, allergy and/or pre-neoplastic transformation.

16. (Cancelled)

17. (Withdrawn and Currently amended) A method of preparing ~~an immunomodulator~~ the construct of claim 1 comprising the steps of:

a. introducing a mutation at one or more positions of 18, 42, 75, and 182 in SEQ ID NO:1 to produce a mutant of superantigen SMEZ-2, a modification and/or a deletion into the T-cell binding site of an antigen-presenting cell (APC) targeting molecule which is structurally a SMEZ-2 superantigen, and

b. coupling thereto the mutant of SMEZ-2 to an immunomodulatory antigen.

18. (Currently Amended) A construct ~~An immunomodulator~~ prepared by: in accordance with a method of claim 17

- a. introducing a mutation at one or more positions of 18, 42, 75, and 182 in SEQ ID NO:1 to produce a mutant of superantigen SMEZ-2, and
- b. coupling the mutant of SMEZ-2 with an antigen.

19. (Currently Amended) A superantigen, which has ~~having~~ the amino acid sequence of SEQ ID NO:1 but for a mutation ~~one or more mutations~~ present at one or more positions of 18, 42, 75 and 182 in SEQ ID NO:1.

20. (Currently Amended) A superantigen as claimed in claim 19, wherein the superantigen has ~~mutations are chosen from the group consisting of:~~

Y18A;  
W75L;  
K182Q; ~~and or~~  
D42C.

21. (Withdrawn) A superantigen SMEZ-2 having the amino acid sequence of SEQ ID NO:2.

22. (Withdrawn) A superantigen SMEZ-2 having the amino acid sequence of SEQ ID NO:3.

23. (Withdrawn and Currently Amended) A nucleic acid encoding any one of the superantigens of [[22]] claim 18.

24. (Withdrawn) A nucleic acid construct comprising at least a nucleic acid encoding any one of the superantigens of claim 18.

25. (Withdrawn) A nucleic acid construct comprising at least a nucleic acid encoding any one of the superantigens of claim 19.

26. (Withdrawn) A nucleic acid construct comprising at least a nucleic acid encoding any one of the superantigens of claim 20.

27. (Withdrawn) A nucleic acid construct comprising at least a nucleic acid encoding any one of the superantigens of claim 21.

28. (Withdrawn) A nucleic acid construct comprising at least a nucleic acid encoding any one of the superantigens of claim 22.

29. (New and Withdrawn) The construct of claim 3, wherein the mutant of superantigen SMEZ-2 has A at position 18 (Y18A) in SEQ ID NO:1